

WHAT IS CLAIMED IS:

- 1           1.     A software test system for testing target software which is  
2     executed in a computer, the software test system comprising:  
3                 a function library file that functionizes and stores commands for  
4     executing objects of the target software as functions;  
5                 an object file that sequentially records keywords, each of which  
6     indicates an object of the target software, in an order in which it is  
7     desired to test the target software, each of the keywords distinguished  
8     by an object identifier; and  
9                 an execution program that sequentially reads keywords from the  
10    object file, recognizes an object to execute, calls a function for  
11    executing the recognized object from the function library file, and  
12    executes the function.
- 1           2.     A software test method for testing target software in a software  
2     test system which is executed in a computer and has a function library file  
3     obtained by generalizing commands of the target software into functions, the  
4     software test method comprising the steps of:  
5                 (a) generating an object file wherein keywords are sequentially  
6     recorded in an order in which it is desired to test the target software,  
7     each keyword indicating an object of the target software and being  
8     distinguished by a respective object identifier;  
9                 (b) sequentially reading the keywords recorded in the object file  
10    and calling functions from the function library file for executing objects  
11    corresponding to the read keywords;  
12                 (c) reading one or more successive keywords following each  
13    keyword read in the step (b) as a predetermined number of function  
14    factors needed for executing each function called in the step (b), and  
15    executing each function called in the step (b); and

16 (d) continuing the test by returning to the step (b) if at least one  
17 keyword which is not executed exists in the object file, and otherwise  
18 ending the test.

1 3. A computer readable recording medium having embodied  
2 thereon a software test program for executing a software test method for  
3 testing target software in a software test system, which software test method  
4 is executed in a computer and comprises a function library file for  
5 functionizing commands of target software generalized into functions and  
6 further comprises an object file for recording keywords in an order in which it  
7 is desired to test the target software, each keyword indicating an object of the  
8 target software, each keyword distinguished by an object identifier, wherein  
9 the software test method comprises the steps of:

10 (a) sequentially reading keywords recorded in the object file and  
11 calling functions for executing objects corresponding to the read  
12 keywords from the function library file;

13 (b) reading one or more successive keywords following each  
14 keyword read in the step (a) as a predetermined number of function  
15 factors needed to execute each function called in the step (a), and  
16 executing each function called in the step (a); and

17 (c) continuing the test by returning to the step (a) if keywords  
18 which are not executed exist in the object file, and otherwise ending  
19 the test.

1 4. A software test system for testing target software which is  
2 executed in a computer, the software test system comprising:

3 a function library file that functionizes and stores commands for  
4 executing objects of the target software as functions;

5 an object management unit for storing keywords corresponding  
6 to respective objects of the target software and for storing factor values  
7 needed to execute the functions, wherein the keywords and the factor

8 values are sequentially input in an order in which it is desired to test  
 9 the target software; and  
 10 an execution program that sequentially reads the keywords and  
 11 factor values from the object management unit, that calls the functions  
 12 corresponding to the factor values to execute the objects  
 13 corresponding to the keywords, and that executes the called functions  
 14 using the factor values.

1 5. The software test system of claim 4, wherein the object  
 2 management unit comprises:

3 a user interface for displaying an input window so that the  
 4 keywords and factors values are sequentially input in a testing order;  
 5 and  
 6 an object database for sequentially storing the keywords and  
 7 factor values input through the user interface.

1 6. A software test system for testing target software which is  
 2 executed in a computer, the software test system comprising:

3 a function library file that functionizes and stores commands for  
 4 executing objects of the target software as functions;

5 a script analyzing unit that extracts keywords and factor values  
 6 in an order in which the target software is tested from scripts generated  
 7 when a first test is performed;

8 an object management unit that stores keywords corresponding  
 9 to respective objects of the target software and that stores factor  
 10 values needed for executing the functions, wherein the keywords and  
 11 the factor values are sequentially input after being extracted by the  
 12 script analyzing unit; and

13 an execution program that sequentially reads the keywords and  
 14 the factor values from the object management unit, calls the functions  
 15 corresponding to the factor values for executing the objects

16 corresponding to the keywords, and executes the called functions  
17 using the factor values.

1 7. A software test method for testing target software in a software  
2 test system which is executed in a computer and which has a function library  
3 file obtained by generalizing commands of the target software to test into  
4 functions, the software test method comprising the steps of:

5 (a) extracting keywords corresponding to respective objects of  
6 the target software and factor values for executing the functions from a  
7 test execution script file, which is generated when the target software  
8 is executed in a predetermined testing order, and building an object  
9 database by sequentially storing the extracted keywords and factor  
10 values in a testing order;

11 (b) sequentially reading the keywords and factor values from the  
12 object database and calling functions corresponding to the factor  
13 values for executing objects corresponding to the read keywords;

14 (c) executing the called function using the factor values read in  
15 the step (b); and

16 (d) continuing the test by returning to the step (b) if at least one  
17 keyword which is not executed exists in the object database, and  
18 otherwise ending the test.

1 8. The software test method of claim 7, wherein the step (a) further  
2 comprises the sub-steps of:

3 (a1) generating the test execution script file by executing the  
4 target software in an order in which it is desired to test the target  
5 software;

6 (a2) storing the keywords of the generated test execution script  
7 file in arrays having a predetermined memory space and providing an  
8 address for accessing each of the arrays;

- 9 (a3) sequentially searching the arrays to determine whether or
- 10 not a syntax characterizing a predefined function exists, and if such a
- 11 syntax does not exist, ending the test;
- 12 (a4) if a word corresponding to the syntax in the step (a3) exists,
- 13 extracting the factor values located within a predetermined distance
- 14 from the word by searching arrays in front of and behind the word and
- 15 providing a keyword needed for calling the corresponding function;
- 16 (a5) temporarily storing the keyword, factor values, and the
- 17 address of the word corresponding to the syntax in rows;
- 18 (a6) sorting in rows the keywords, factor values, and the
- 19 address of the syntax stored in the step (a5) according to the address
- 20 of the syntax; and
- 21 (a7) storing the keywords and factor values in rows in the object
- 22 database in the order as sorted in the step (a5).

1 9. A computer readable recording medium having embodied

2 thereon a software test program for a method for automatically building an

3 object database in a software test system, which software test program is

4 executed in a computer and comprises a function library file for functionizing

5 commands of target software into functions, the object database storing

6 keywords and factor values in an order in which it is desired to test the target

7 software, wherein the method for automatically building an object database

8 comprises the steps of:

- 9 (a1) generating a test execution scripts by executing the target
- 10 software in an order in which it is desired to test the target software;
- 11 (a2) storing words of the generated test execution scripts in
- 12 arrays having a predetermined memory space, and providing an
- 13 address for accessing each of the arrays;
- 14 (a3) sequentially searching the arrays to determine whether or
- 15 not a syntax characterizing a predefined function exists, and if such a
- 16 syntax does not exist, ending the test;

17                   (a4) if a word corresponding to the syntax in the step (a3) exists,  
18                   extracting the factor values located within a predetermined distance  
19                   from the word by searching arrays in front of and behind the word, and  
20                   finding a keyword needed for calling the corresponding function;  
21                   (a5) temporarily storing the keywords, factor values, and the  
22                   address of the word corresponding to the syntax in rows;  
23                   (a6) sorting in rows the keywords, factor values, and the  
24                   address of the syntax stored in rows in the step (a5) according to the  
25                   address of the syntax; and  
26                   (a7) storing the keywords and factor values in rows in the object  
27                   database in the order as sorted in the step (a6).